with respect to the optical signal with wavelength λi and the attenuation Aj(λi) is produced by the dopant j of one unit.

MC 12/20/06

25. (New) The optical fiber for attenuating optical signal according to claim 24, wherein said dopants comprise at least two kinds of transitional metals selected from the group consisting of Co, Ni, Cr, V, Fe, Mn, Tb and Tm.

26. (New) An optical fiber for attenuating an optical signal comprising a core and a cladding, wherein n (n≥2) kinds of dopants are included in the optical fiber for attenuating the optical signal,

wherein the concentration Wj (j=1, 2, 3, ..., n) in weight % is adjusted, with respect to a wavelength λi (i=1, 2, ..., m; m≥2), to satisfy the following expressions 1 and 2;

Expression 1

$$0.9 < \frac{\alpha(\lambda_i)}{\alpha(\lambda_k)} < 1.1$$

Expression 2

$$\alpha(\lambda_i) = \sum_{j=1}^{n} W_j \, A_j(\lambda_i)$$

wherein λi is a wavelength of the optical signal,

α(λi) is an attenuation amount of the optical fiber for attenuating the optical signal with respect to the optical signal having the wavelength λi,